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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,877	09/11/2003	Tatsuo Fukushi	58079US004	5006

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EXAMINER	
HU, HENRY S	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/659,877	FUKUSHI ET AL.	
	Examiner	Art Unit	
	Henry S. Hu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment of September 15, 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-20* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9-15-2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to faxed Amendment filed on September 15, 2005. **Claims 1, 5, 9 and 18 were amended, and no new claim was added**. To be more specific, parent **Claims 1** and 18 were only amended cosmetically, while Claims 5 and 9 were amended to remove all improper informalities in claim objections.

With respect to specification objections, the objection on (b) and (d) is found to be a repetitive error and the Applicants have made all the necessary corrections on page 4-8 and 11 accordingly. The Applicants have provided a statement for the use of "**TR-10 of –20°C or less**". In view of above amendment, the examiner thereby withdraws specification objections and claim objections. After the Examiner has examined the argument on restriction on pages 9-10 of Remarks, the restriction requirement is still found to be proper with the same reason as discussed earlier. **Claims 1-20 are now pending** with a total of three independent claims (Claim 1, Claim 17 and Claim 18), **while Claim 17 (non-elected with traverse) is still withdrawn from consideration by the examiner.** An action follows.

Response to Argument

2. Applicant's argument filed on June 16, 2005 has been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: In

view of the Applicants' argument on pages **16-18** of Remarks, all the claim rejections are sustained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. *The limitation of parent* ***Claim 1*** *in present invention relates to* ***a compound comprising****: (a)* ***an amorphous copolymer*** *including interpolymerized monomeric units derived from one or more* ***perfluorinated vinyl ether monomers of Formula I or II****; and (b)* ***a curable component including at least one filler****, present in an amount of at least 10 parts per 100 parts of component (a), such that upon vulcanization the resulting compound has: (A)* ***a Shore A hardness*** *according to ASTM D2240* ***of 60 or greater****, (B) a* ***TR-10 of –25°C or less****, and (C) a* ***permeation of 65 (g-mm/m^2-day) or less****. Other parent* ***Claim 18*** *relates to the process of making an elastomer from vulcanizing a compound of Claim 1. See other limitations of dependent* ***Claims 2-16 and 19-20****.*

6. Claims 1-15 and 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Grootaert et al. (WO 02/060968 A1 which is equivalent to its US 6,730,760 B2) for the reasons set forth in **paragraphs 8-10 of office action dated 6-16-2005 as well as the discussion below**.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grootaert et al. (WO 02/060968 A1 which is equivalent to US 6,730,760 B2) in view of Guerra et al. (US 5,384,374) for the reasons set forth in **paragraph 11 of office action dated 6-16-2005 as well as the discussion below**.

8. **Applicants**: Applicants have claimed in two parent **Claims 1 and 18** an unexpected way of obtaining a curable compound comprising: (a) **an amorphous copolymer** including interpolymerized monomeric units derived from one or more perfluorinated vinyl ether monomers of **Formula I or II**; and (b) a curable component including at least one filler. The cured compound after vulcanization has three properties as: (A) a Shore A hardness according to ASTM D2240 of 60 or greater, (B) a TR-10 of –25°C or less, and (C) a permeation of 65 (g-mm/m^2-day) or less.

With respect to 102/103 rejections as well as 103 rejection both involving the Grootaert reference, the Applicants allege that Grootaert's copolymer is not specified as "**amorphous**" at all (see page 16 of Remarks). The Applicants further allege that "substantially identical curable composition" cited by the Examiner fails to cite a reference (page 16 of Remarks). The Applicants furthermore allege that the secondary reference Guerra does not overcome the shortcomings of Grootaert (page 18 of Remarks). Therefore, the above-mentioned prior art, in combination or alone, fails to teach or suggest such a specific curable compound of parent Claims 1 and 18.

9. **Examiner**: As discussed in the earlier office action for two parent **Claims 1 and 18**, the Grootaert reference has already disclosed a process for making a curable fluorinated elastomer composition comprising: (A) a fluoroelastomer comprising perfluorovinyl ether having a general formula of CF_2=CF-$(O(CF_2)_n)_m$-$(OCF_2)_x$-OR_f , which is specifically reading on the claimed **formula (I) when m is 1**, (B) a mixture of curative (along with its coagent), (C) peroxide, and

(D) some conventional filler or additive as specified; so that the cured product has **a claimed Shore A hardness of 78** from the measurement with ASTM D2240-85 method. With respect to the argument on using "**substantially identical composition**" for inherent properties, attention is directed to Grootaert's disclosure in column 3, line 23-39; column 1, line 11-15; and column 2, line 24-43.

With respect to the key argument on "amorphous copolymer" being not mentioned, it is found that Grootaert's copolymers in the working examples only disclose glass transition temperature. For instance, column 11, line 57 in Example 1. It is noted that **substantially amorphous polymers generally exhibit no or hardly no melting points** as known in the art (see US Patent No. **6,613,846 B2 to Hintzer** et al. at column 5, line 17-20).

10. The examiner has fully understood that present application may have presented some surprising results (see page 17 of Remarks). However, as the Applicants have already admitted that **not all levels of conventional additives give such three results** in (A) a Shore A hardness according to ASTM D2240 of 60 or greater, (B) a TR-10 of –25°C or less, and (C) a permeation of 65 (g-mm/m^2-day) or less. Additionally, a surprising result may be just an excellent result and is not necessarily to be an unexpected result. According to MPEP, **unexpected results "cannot" form a basis for rebutting an anticipation rejection under 35 USC "102"**. In re Malgari, 499 F.2d 1297, 1302, 182 USPQ 549.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The **fax** number for the organization

where this application or proceeding is assigned is **(571) 273-8300** for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Henry S. Hu

Patent Examiner, art unit 1713, USPTO

October 24, 2005

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